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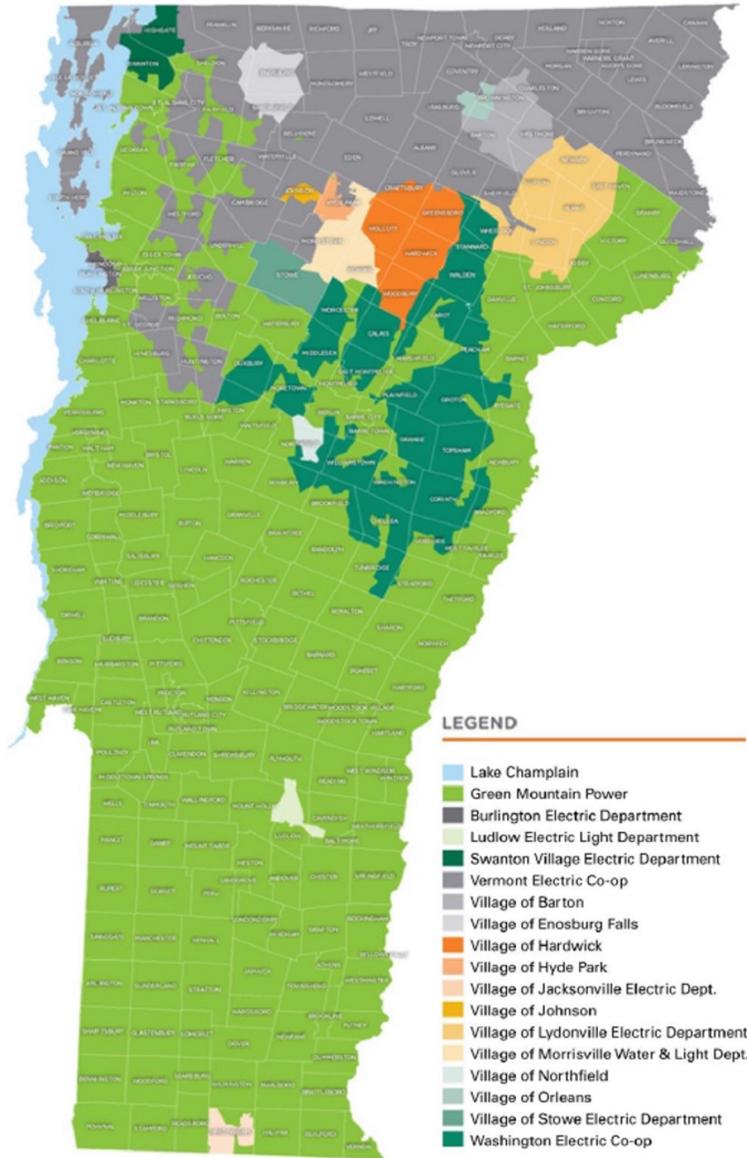
# Affordable Heat Act & Electrification

Senate Committee on Natural Resources and Energy

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Josh Castonguay & Candace Morgan | February 7, 2023

# GMP: Who We Are



GMP serves over 270,000 customers in 202 towns, covering 77% of Vermont

- 85% residential customers, 15% businesses
- Suburban and mostly rural territory with approximately 12,500 miles of distribution lines and 1,011 miles of sub-transmission
- 15 district offices across Vermont
- Just over 500 employees, including 285 members of the IBEW Local 300
- GMP's annual energy mix is 100% carbon free and 78% renewable.
- GMP will be 100% renewable by 2030

# A Reliable & Resilient Grid for Customers

- ▶ Reliable, Resilient Grid Now and In the Future
  - ▶ Focus on programs and projects to accelerate the necessary carbon transformation of thermal and transportation sectors
  - ▶ Equitable transition for all customers, keeping electric rates affordable
  - ▶ More than ever important to strengthen the grid as the backbone for clean electrification
- ▶ System level tools
  - ▶ Vegetation management
  - ▶ Storm hardening and smart controls
  - ▶ Strategic undergrounding
- ▶ Service level tools
  - ▶ Transformer upgrades
  - ▶ Home, business upgrades
  - ▶ Customer Distributed Energy Resources for flexibility



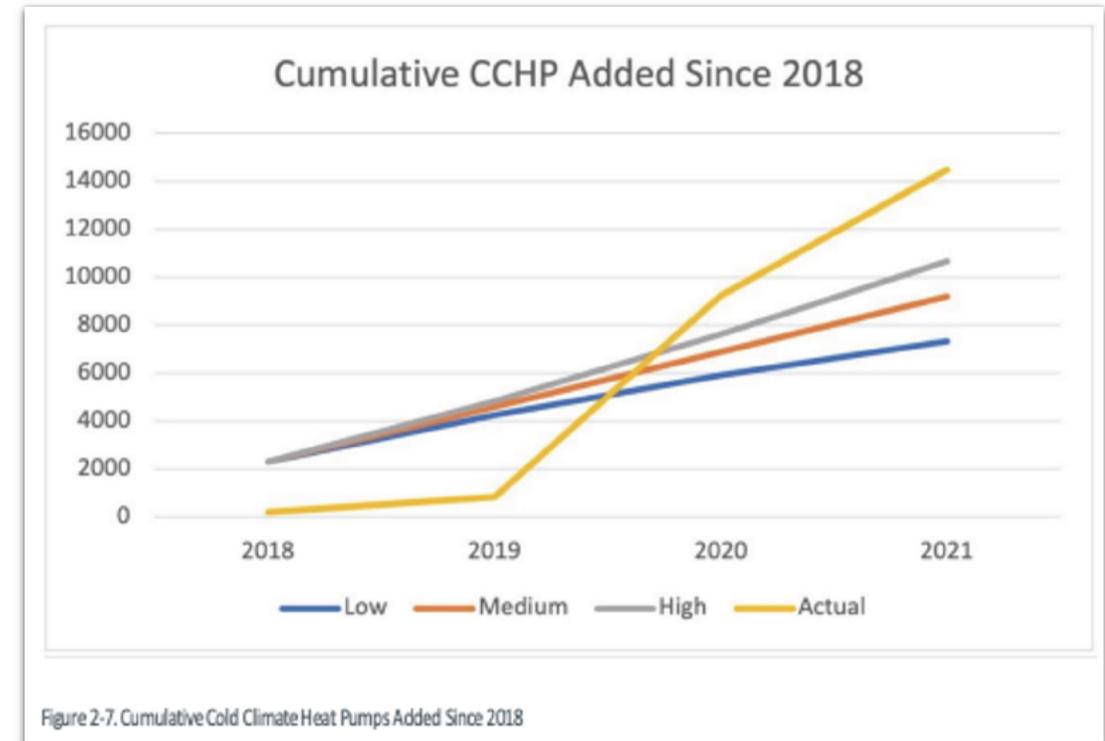
# Cutting Carbon & Costs: Load Management Innovation

- **Storage-integrated Cold Climate Heat Pumps (CCHP):**  
Storage helps customers through outages and through peak events
- **Integrated controls:**  
By device and through single thermostat to control CCHPs and any backup heating system
- **Smart Panels:**  
Circuit-level monitoring and management



# Customers and Cold-Climate Heat Pumps

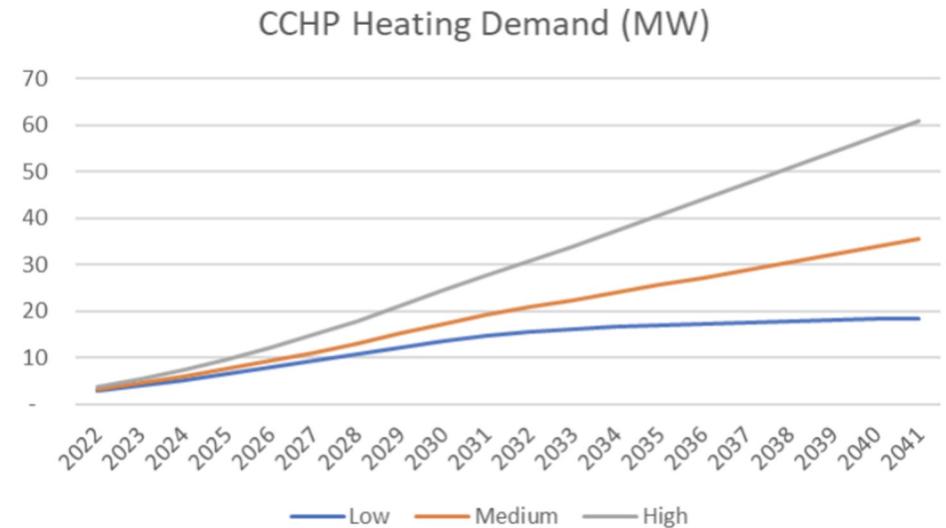
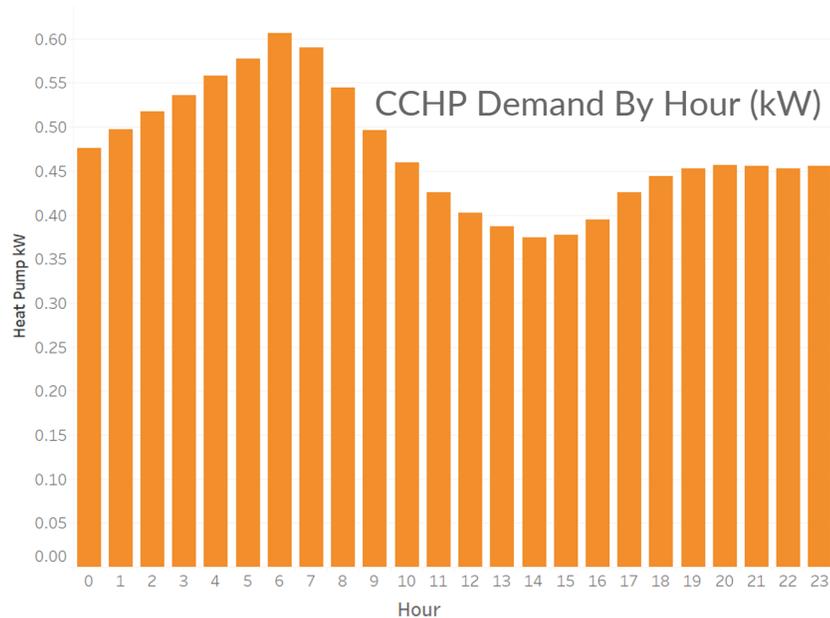
- ▶ In the past three years, over 15,000 customers have installed eligible devices
  - ▶ Many installing more than one device.
  - ▶ 2020 saw a large number of installations with 6,500 installed over the months of July-September that year alone, and progress continued in 2021
  - ▶ 2022 highest yet in GMP territory over 8,500 heat pumps installed
- ▶ Continuing to support CCHP adoption is a key strategy for meeting our Tier III goals, cutting carbon emissions and costs for customers
- ▶ Important for continued progress, overall carbon reduction and affordability that Tier III not conflict with or create greater costs/burdens for customers if the Clean Heat Standard is adopted



Source: [GMP's 2021 Integrated Resource Plan](#)

# Cold-Climate Heat Pumps Into the Future

- Even in high adoption scenario (over 200,000 systems by 2040), CCHP additional electric demand is modest
- Winter heating demand for CCHP is significantly higher (2X-3X) than summer cooling
- Key to continue to lead and work on ways to meet and manage high demand periods
  - For context, GMP has ~30MW storage already online



Source: [GMP's 2021 Integrated Resource Plan](#)



Questions?

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